Abstract

This invention provides a steel sheet for a mask frame which maintains a tension-type color CRT shadow mask under tension.

The steel sheet has a steel composition consisting essentially of, in mass %, C: 0.03 - 0.30%, Si: at most 0.30%, Mn: 0.05 - 1.5%, P: at most 0.05%, S: at most 0.02%, Mo: 0.02 - 0.50%, V: 0.02 -0.20%, Al: at most 0.10%, N: 0.0040 - 0.0200%, optionally one or two or more of Cu: at most 1.0%, Ni: at most 1.0%, Cr: at most 2.0%, W: at most 1.0%, B: at most 0.003%, Ti: at most 0.030%, and Nb: at most 0.030%, and a balance of iron and unavoidable impurities, with $Al \leq (7.0)N$, and having a metal structure in which the ferrite particle diameter is at most 15 micrometers and the ferrite volume ratio is at most 90%. The steel sheet is manufactured by hot rolling of a slab having the above-described steel composition under the conditions of a finishing temperature of 820 - 950°C and a coiling temperature of 400 - 700°C.